

COUNCIL AGENDA: 03-28-06

ITEM: 2.6

Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: Scott P. Johnson

SUBJECT: SEE BELOW

DATE: March 9, 2006

Approved

Date 3/21/06

**SUBJECT: SOLE SOURCE PURCHASE OF RADIO CONSOLE UPGRADE FROM
MOTOROLA INCORPORATED**

RECOMMENDATION

Adoption of a resolution authorizing the Director of Finance to execute a Radio Dispatch Upgrade Agreement with Motorola, Inc. (Motorola) located in San Diego, California for sole source purchase of hardware and software upgrade in the amount of \$697,267.78 including sales tax and implementation services.

BACKGROUND

The City operates a complex network of radio systems serving the Police and Fire Departments. The dispatch consoles are at the very heart of the radio dispatch operations. If the dispatch consoles do not work, then the entire dispatch system fails. In 1984, the Director of General Services approved standardization on Motorola radio equipment after the Police and Fire Departments experienced system problems with non-Motorola radio equipment. This standardization was initially approved by City Council on November 20, 1984 and has been periodically renewed since then. The most recent renewal of the Motorola standard was approved by the Director of General Services on October 18, 2004.

The current configuration of the dispatch center is based on old push-button and LED technology that has been long discontinued and has reached maximum capacity with no opportunities for future expansion. Since the system's initial installation, technology has advanced to a software and computer workstation driven product that will reduce repetitive stress on dispatchers.

The new radio electronics upgrade is based upon state of the art technology using the Microsoft Windows NT platform, which provides integration of the radio electronics in a personal computer. The primary benefits of the system allow the users more flexibility of dispatching emergency personnel by moving into a computer-based radio control. Dispatchers will be able to simultaneously transmit and receive messages from multiple groups, which is critically important during major emergencies or natural disasters. With the upgraded workstations, the

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dispatchers will be able to easily access information through Graphical User Interface (GUI) features by Cathode Ray Tube (CRT) touch screen monitor or by the click of a mouse.

This console upgrade to the radio console electronics will enable the City to build upon existing investment of radio communications equipment, while enhancing the console features and functionalities. The console upgrade will provide increased capacity for the Central Electronics Bank (CEB) including new firmware that will keep the system stable and accommodate future expansion; provide back-up redundancy in the system to ensure no single point of failure; and enable remote diagnoses and repair capability (instead of physical maintenance/repair).

ANALYSIS

The existing Police and Fire Dispatch Radio Console System consists of specialized proprietary software and hardware developed by Motorola. This contract is a sole source purchase because Motorola does not utilize resellers for major upgrades.

The proposed agreement with Motorola will build upon the existing radio communication investment and provide the required hardware and software upgrade for critical emergency communications with Police and Fire Departments. In addition, the upgrade pricing has been negotiated to achieve \$85,000 in savings. Below is the price breakdown:

<u>Component</u>	<u>Upgrade</u>
Software	\$ 146,205.00
Equipment	\$ 396,362.00
Install and Optimization Services	\$ 191,000.00
Discount	(\$ 85,000.00)
Tax	\$44,761.78
Freight	\$ 3,939.00
Total	\$697,267.78

Annual Support Renewal Not Required*

*The City has this technology installed in three existing workstations and staff has been trained to support this upgrade.

Since the City is heavily invested in Motorola communications infrastructure and field equipment throughout the Police and Fire Departments' emergency communications, it is not prudent to introduce significant risk and cost that may be associated with another radio brand.

To ensure greater flexibility and enhanced radio console features and functionalities required by Police and Fire Departments, Finance staff has determined that the continued acquisition of Motorola brand communication equipment is justified. As required by Municipal Code 4.12.149, the Director of Finance has reviewed and approved Brand Name and Proprietary Procurement Form on February 6, 2006 (attached).



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OUTCOME

The Dispatch Radio Console Upgrade will ensure optimum performance in communications between the City's 911 Public Safety Answering Point (PSAP) and the Police and Fire Departments.

PUBLIC OUTREACH

Not applicable.

COORDINATION

This memorandum has been coordinated with the General Services Department, Police Department, Fire Department, City Attorney's Office, and City Manager's Budget Office.

COST IMPLICATIONS


This council item is consistent with General Principle #2, "We must focus on protecting our vital core city services", and Item #7 "We must continue to Streamline, innovate, and simplify our operations... so that we can deliver services at a higher quality level, with better flexibility, at a lower cost."

BUDGET REFERENCE

Fund #	Appn. #	Appn. Name	Total Appn.	Amount of Contract	2005-2006 Adopted Budget (Page)	Last Budget Action (Date, Ord. No.)
397	4056	Communications Equipment Replacement & Upgrade	\$1,939,715	\$697,267	V-1182	N/A

CEQA

Not a project.


SCOTT P. JOHNSON
Director, Finance



Memorandum

TO: Scott P. Johnson

FROM: Walter C. Rossmann, C.P.M.

SUBJECT: SOLE SOURCE AUTHORIZATION DATE: March 8, 2006
FOR MOTOROLA RADIOS AND
RELATED COMMUNICATIONS EQUIPMENT

Approved

Date

The General Services, Radio Shop Division has requested a Brand Name Procurement for Motorola mobile, portable, base-station radios and related communications equipment. The City operates a complex network of radio communications and systems serving the Police and Fire Departments. The existing Motorola radio dispatch consoles are at the very heart of dispatch operations. If the radio dispatch consoles do not work, then the entire dispatch system fails.

Motorola has long been a City standard for radios and related equipment. Prior to the Motorola standardization in 1984, the City experienced constant problems from the departments and the technical staff regarding other makes of radio equipment. Below are key factors for sole source procurement:

1. Match existing Motorola radio/systems (MC 4.12.149.B.2)


- Interoperability is critical for emergency communications with Police and Fire when seconds count in saving lives
- Radio equipment is based on specialized and proprietary software and hardware

2. Achieve cost savings (MC 4.12.149.B.5)

- Efficient and cost effective repair and maintenance
- Efficient and cost effective user training
- Minimize cost associated with supplies and spare parts
- Minimize modifications that may be required to non-Motorola radio equipment

For these reasons, the Purchasing Division supports the General Services request for brand name purchases of Motorola communication equipment and related services.

Pursuant to San José Municipal Code section 4.12.149.B.2 and B.5, Purchasing has determined that the continued acquisition of Motorola communication equipment and services is justified to ensure optimum performance in communications between the City's 911 Public Safety Answering Point (PSAP) and the Police and Fire Departments. This decision is valid for three years from the date of approval of this memorandum. In case the City replaces the existing Mobile Radio System, this determination needs to be reviewed.


WALTER C. ROSSMANN, C.P.M.
Chief Purchasing Officer

cc: Peter Jensen, Director, General Services





PURCHASING ADMINISTRATIVE MANUAL

CITY OF SAN JOSE

Subject: BRAND NAME AND PROPRIETARY PROCUREMENT

EFFECTIVE DATE: 4/1/91, REVISED: 02/15/05

SECTION NO. P-210

Department and Contact Information

Department and Contact Information:

Information Technology / Don Beams

Required Contract Information

Contractor: Motorola, Inc..

Address: 1150 Kifer Rd., Suite 100 Sunnyvale, CA 94086-5312

Contact Person and Telephone Number: Paolo Caltagirone, Account Manager

Cell: (650) 678-5477

Voice: (650) 577-0339

FAX: (650) 577-0333

Type of Product / Service Offered (briefly describe):

Land-mobile, two-way radio products and related items.

Complete responses must be provided for all of the items listed below

A. GENERAL INFORMATION:

1. What are the performance requirements for the product you are requesting?

(Please provide documentation if available)

The City of San Jose operates diverse and technically sophisticated radio communications systems for all of its public safety and non-public safety departments. Nineteen (19) different models of radio communications equipment are required to meet system configurations and requirements. Each of these models require spare radios, replacement circuit boards and other part in order to limit equipment downtime and serve the needs of our customer departments in an efficient manner.

Clear and concise communications is essential for emergency communications. Emergency incidents require the coordinated actions of multiple departments, the ability to communicate is often compromised by the variety of radio systems. The ability for Police and Fire Departments to successfully communicate with Dispatch Operations is dependent on the following key requirements:

- Complete Interoperability (compatibility) in radio communications equipment. With Motorola's wide range of product offerings, reliable and rugged equipment is available in low-tier, mid-tier, and high-tier price ranges without the need to adopt equipment from other manufacturers
- High reliability of equipment for mission critical radio communications
- 9000 series radio remote control head for standardized placement of the user controls that are needed to change channels and operate related functions.

2. What products could potentially meet these performance requirements?

While there are other radio equipment brands (i.e. MAXON, Icom, Uniden, Ritron, SmartComm, TEKK RELM etc), past experience (prior to 1984 standardization on Motorola) has proven that a product mix of non-Motorola and Motorola radios is not a good strategy or solution. Furthermore, non-Motorola radios were found to be unreliable.

Only Motorola brand equipment has consistently met the City's reliability requirements (minimum down-time) and overall superior performance required by our public safety departments. Motorola has long led the industry in radio for public safety.

3. What market research was conducted, including evaluation of other items considered?

Were there other items with less restrictive specifications available? (Describe your efforts to identify other goods/services that could have been procured to meet your requirement and indicate why those alternatives were deemed inappropriate or unavailable. Please include the names and addresses of suppliers contacted and the reasons for not considering them, OR explain why the surveyor effort to identify other goods/services was not performed.)

No survey is currently under way due to extreme time constraints in the approval of a pending order of 161 mobile radios, in which grant funding will be lost if the order is not approved. Federal grant funding, on a General Fund reimbursement basis was made available for early replacement of 161 mobile radios with a newer model that provides direct interoperability with other local police department networks.

4. Are you purchasing this product in order to conduct a field test? Please describe the parameters of the test.

No

5. Is this product necessary to match existing inventory? Please state why.

Yes, Motorola radios and related equipment is required to MATCH existing equipment. Approximately, 99.91% of the existing mobile, hand-held and paging receivers that are used on City radio networks are Motorola brand equipment. Since the City is heavily invested in Motorola communications infrastructure and field equipment throughout the Police and Fire Departments emergency communications estimated at approximately \$11M, it is not prudent to introduce significant risk and cost that may be associated with another radio brand.

There are significant potential problems in purchasing and implementing different brand radios because there is no interchangeability of equipment between manufacturers and most of their options are proprietary. For example, the Motorola 800 MHz Mobile Data Network relies on Motorola's RD-LAP messaging protocol for connectivity between the 911-dispatch center and the Motorola radio modems used in Police and Fire Department vehicles.

**6. Is the purchase of this product consistent with an approved technology architectural standard?
Please attach documentation.**

The existing Police and Fire Dispatch Radio Console System consists of specialized proprietary software and hardware developed by Motorola and has been operational since 1989. ITPB and Steve Turner concur with the recommendation for standardization

B. PRICE ANALYSIS:

7. What pricing information was obtained?

In the past, Purchasing has priced similar types of radio equipment with other manufacturers to determine if the prices from Motorola are competitive. From past order history, Motorola provides a minimum discount of 15% per unit when orders are less than 15 units, along with higher discounts in the 20% to 35% range with orders larger than 15 units. In addition, the City of San Jose will receive the same pricing on Motorola equipment that other local agencies receive on their purchase under the Western State Contracting Alliance (WSCA).

General Services works closely with Purchasing to regularly monitor the market to ensure that the City receives highly reliable equipment at the best possible price.

8. Describe any cost savings realized or costs avoided by acquiring only this product versus other products.
 (For "standardization" requests please explain significant costs savings. Refer to the San Jose Municipal Code, Section 4.12.149 B (1), (2) and (5) for additional information to justify standardization based on cost savings or cost avoidance.)

Cost savings are achieved on a per project basis. For example, in a current project to replace 161 Motorola Spectra-A9 series radios with the newer AstroSpectra W4 series equipment resulted in cost savings of \$88,000 in parts and labor due to having interoperability capability in utilizing existing Motorola radio control cables installed in the Police Department's vehicles. This type of savings will most likely occur in the future with other similar models of equipment, and a related savings would not occur with models from other manufacturers.

In general, cost savings are achieved on standardized Motorola products in the following categories:

- Cost effective service, repair and maintenance (technician proficiency in one brand). Of the 7,000 pieces of Motorola mobile, hand-held and base station equipment that are supported on a Citywide basis. Only one set of test equipment is required for all various models of Motorola communications equipment. Since there is compatibility between manufacturers for testing, programming etc., additional test equipment and fixturing would be required for each non-standardized model of radio added to the City's radio network.
- Cost effective programming software for different models of equipment is essentially similar when they are from a standardized manufacturer. Modification of new test harnesses for bench testing is eliminated with standardization. Motorola has adopted specific test fixtures and metering adaptors that are specific to Motorola hand-held (portable), and mobile radios. Adopting other brands of equipment would require the purchase of additional types of support equipment, fixturing, and radio programming software.
- Cost effective training results when standardized on a specific brand of equipment.
 - Technician training is improved. The cost of training averages \$800 per model per technician. Each new manufacturer model added would result in an additional cost of approximately \$6,400 for training and \$4,500 in lost productive wages. Service and maintenance manuals are written from a common perspective, and with a consistent "look & feel" when they are from a single manufacturer.
 - User training is more efficient when older equipment is replaced with newer equipment due to same brand similarities. In addition, Officer safety is improved because standardization enables Officers to locate and operate Motorola's standard radio controls during high stress incidents.
- Minimize spare parts for single brand. The need to stock additional spare parts for each non-standardized radio is eliminated. For each new, non-standardized model and manufacturer, one or more spare radios would be required to support the sub-fleet of installed equipment, along with a spare parts equivalent of 11:2 times the cost of the radio, to a maximum of 10 percent of the overall cost of the equipment being added to the City's fleet.

Required Approvals

Requesting Department Director

☒ Approved ☐ Denied

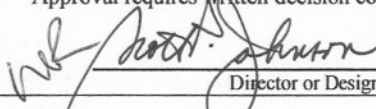


 Date

Finance Director

☒ Approved ☐ Denied

Approval requires written decision consistent with Section 4.12.149 subsection C, Memo attached



 Director or Designee/Date 3/8/06